

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): GROEZINGER	Confirmation No. 7398
Application No.: 10/591,198	Art Unit: 1793
Filed: 30 Aug 2006	Examiner: LIN, KUANG Y
Title: WATER-SOLUBLE SALT CORES	
Attorney Docket No.: 1032/0108PUS1	

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REQUEST FOR RECONSIDERATION OF DECISION ON APPEAL  
PURSUANT TO 37 C.F.R. 41.52

Dear Sir:

Pursuant to the provisions of 37 C.F.R. 41.52, Applicant hereby requests that the Board of Patent Appeals and Interferences reconsider the Decision on Appeal mailed September 7, 2011. Several points believed to have been misapprehended or overlooked by the Board are stated with particularity below.

The prior art reference to Halpern describes molding cores formed from sand and a resin binder. Halpern teaches that graphite is sometimes used as a lubricant in these cores. Other prior art references describe molding cores formed from water-soluble salt. Graphite is not used in any of those cores. At issue on appeal was whether a person of ordinary skill in the art would have any reason to add graphite to a water-soluble salt core based on the presence of graphite in Halpern. Applicant maintains that a proper reason for modifying the prior art references, as required by

*KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007), has not been identified. A prima facie case of obviousness has therefore not been presented, and all claims are submitted to be allowable for this reason.

The Decision on Appeal asserts that it would be obvious to add graphite to a water-soluble salt molding core in order to solve two problems. The Decision asserts that adding graphite would 1) minimize any adhesion during casting associated with the binder in the core forming composition and 2) minimize the formation of dust associated with using water-soluble salt and binder particles (page 7). Applicant agrees that if water-soluble salt cores suffered from either one of these problems, a person of ordinary skill in the art might consider how others had addressed these problems. However, it is respectfully submitted that nothing in the record suggests in any manner that water-soluble salt cores suffer from adhesion problems like sand-and-resin cores, and nothing in the record suggests in any manner that water-soluble salt cores suffer from a dust problem like sand-and-resin cores. Moreover, even if water-soluble salt cores were shown to suffer from a dust problem, nothing in the record suggests that adding graphite to those cores would ameliorate this problem. Each of these points is addressed below.

The Halpern reference contains a single reference to “dust”: column 2, lines 42-45, describes “Example 1,” a product that is “virtually dust-free.” This language might suggest that dust is a problem when sand-and-resin cores are produced. However, the record does not explain why the product of Example 1 is “virtually dust free.” The phrase “dust-free” appears after an identification of the lubricant that is used in Halpern’s sand core, but the reference does not indicate that the lubricant produced the

virtually dust free product. Moreover, in Example 1, the lubricant was not graphite. Instead, the lubricant used was bis-stearamide of ethylene diamine. The fact that bis-stearamide of ethylene diamine was present in a mixture and that the mixture was virtually dust free does not establish that the bis-stearamide of ethylene diamine caused this dust free condition. Even if bis-stearamide of ethylene diamine did reduce dust, this in no way supports the assertion that using graphite as a lubricant would also reduce dust. And lastly, nothing in the record suggests in any manner that dust is a problem associated with water-soluble salt cores.

The record does not show that dust is problem associated with water-soluble cores and even if it were a problem, the record in no manner suggests that adding graphite to water-soluble cores will reduce dust. It is not obvious to modify a reference to address a non-existent problem, especially when there is no evidence that the proposed solution solves the problem where it does exit. The statement that one would add graphite to a water soluble core to reduce dust is therefore not supported by the record and cannot support an obviousness rejection of claim 1.


The Decision also indicates that graphite would be added to a water-soluble core to minimize any adhesion during casting. However, this assertion does not take into account the fact that sand-and-resin cores have very different physical properties that water-soluble cores. Sand is not water-soluble while a water-soluble core, by definition, is. Non-soluble sand might adhere to an item being cast, and it thus makes sense to use a lubricant to address this adhesion problem. Water-soluble cores, on the other hand, dissolve - beneficially, this means that there is nothing left to adhere to the item being cast. Unless "adhesion during casting" can be shown to be a problem associated

with water-soluble salt cores, a person of ordinary skill in the art would have no reason to address adhesion problems. It is not obvious to try to fix a problem that doesn't exist. The record contains no information to support the assertion that water-soluble salt cores suffer from an adhesion problem, and the record thus contains no reason for a person of ordinary skill in the art to address an adhesion problem with the teachings of Halpern. This statement also does not constitute a proper reason for modifying the prior art and does not support the obviousness rejections of the claims in this application.

The Decision on Appeal is submitted to be based on the misapprehension of the foregoing facts. The record contains no reason to add graphite to a water-soluble salt molding core, a prima facie case of obviousness has not been presented in connection with any claim, and all claims are submitted to be allowable for these reasons. Wherefore, reconsideration and reversal of the Board's Decision on Appeal dated September 7, 2011, is earnestly solicited.

Date: Nov 7, 2011

Respectfully Submitted,

  
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